ÍNDICE

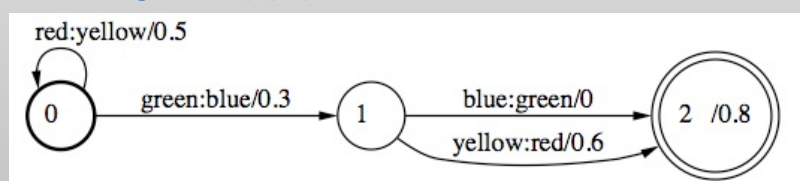
F S M

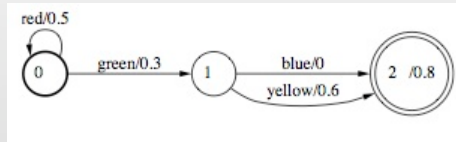
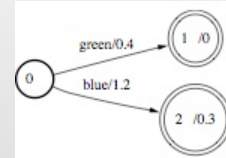
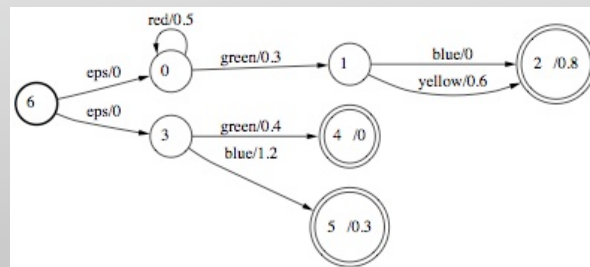
- *Definição dos símbolos* (t.syms)

```
red      1
green    2
blue     3
yellow   4
```

- *Definição de um transdutor* (t.txt)

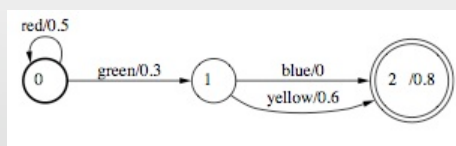
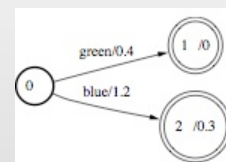
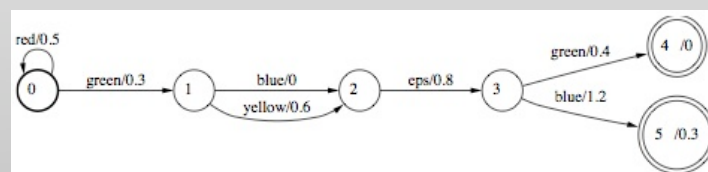
```
0   0   red     yellow    .5
0   1   green   blue      .3
1   2   blue    green
1   2   yellow  red       .6
2   .8
```

- *Representação gráfica* (t.ps)

UNIÃO DE TRANSDUTORES

```
fsmunion A.fsm B.fsm > C.fsm
```

A.fsm

B.fsm

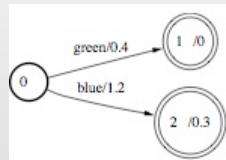
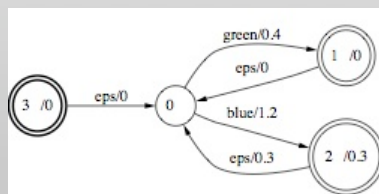
C.fsm

CONCATENAÇÃO DE TRANSDUTORES

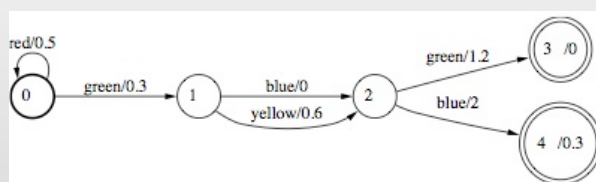
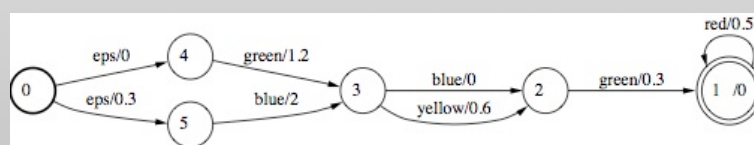
```
fsmconcat A.fsm B.fsm > C.fsm
```

A.fsm

B.fsm

C.fsm

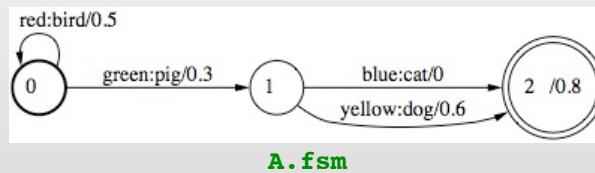
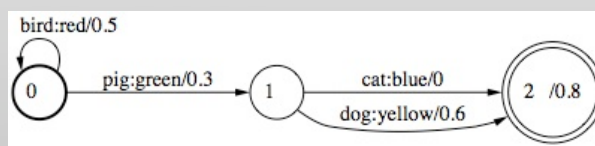
FECHO DE TRANSDUTORES

```
fsmclosure B.fsm > C.fsm
```

B.fsm

C.fsm

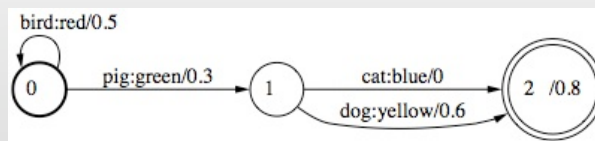
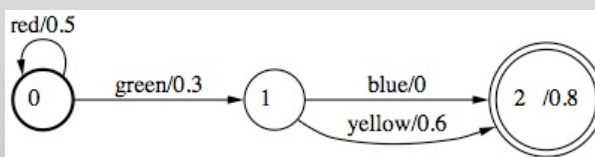
"REVERSAL" DE TRANSDUTORES

```
fsmreverse A.fsm > C.fsm
```

A.fsm

C.fsm

INVERSÃO DE TRANSDUTORES

`fsminvert A.fsm > C.fsm`

A.fsm

C.fsm

PROJECÇÃO DE TRANSDUTORES

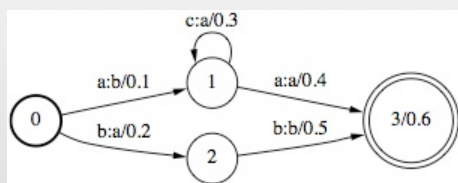
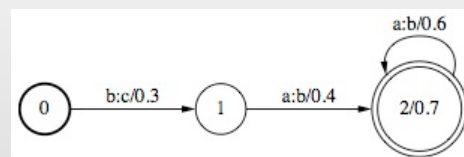
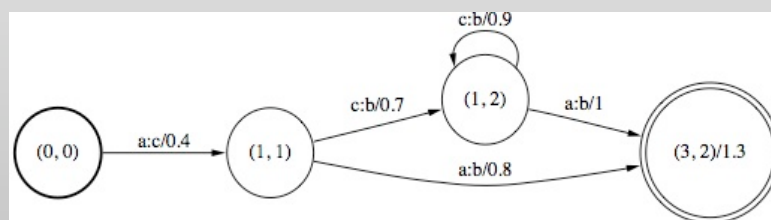
`fsmproject -1 A.fsm > C.fsm`

A.fsm

C.fsm

COMPOSIÇÃO DE TRANSDUTORES

- ***Para obter o transdutor composto:***
  - Cria um novo estado (x,y) para todos os pares de estados $x \epsilon Q_1$ e $y \epsilon Q_2$
  - A função de transição da composição é definida por

    $\delta((x,y),i{:}o)=(v,z)$ se $\delta_1(x,i{:}c) = v$ e $\delta_2(y,c{:}o) = z$

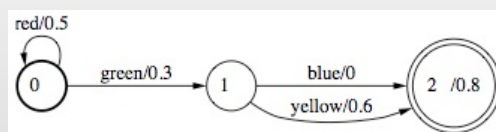
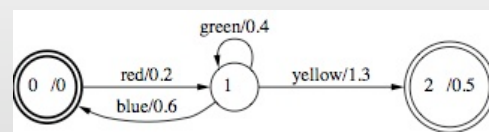
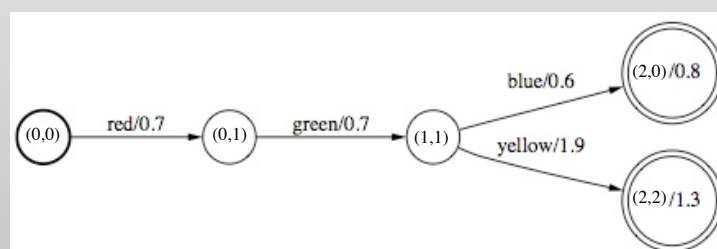
COMPOSIÇÃO DE TRANSDUTORES

```
fsmcompose A.fsm B.fsm > C.fsm
```

A.fsm

B.fsm

C.fsm

INTERSECÇÃO DE TRANSDUTORES

- *O algoritmo de intersecção apenas considera o produto cartesiano dos estados*
  - Para cada estado q_i do primeiro transdutor, e q_j do segundo transdutor, cria-se um novo estado q_{ij}
  - Para o símbolo de entrada a, se o primeiro transdutor transitava para o estado q_n e o segundo transdutor transitava para o estado q_m o novo transdutor transita para o estado q_{nm}

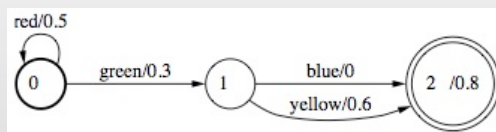
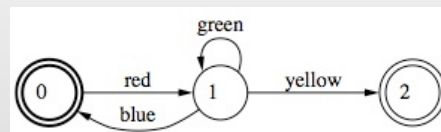
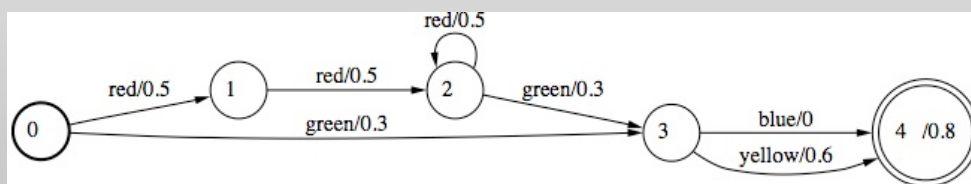
INTERSECÇÃO DE TRANSDUTORES

```
fsmintersect A.fsm B.fsm > C.fsm
```

A.fsm B.fsm

C.fsm

DIFERENÇA DE TRANSDUTORES

- *Diferença(A,B) = Intersecção(A,Complemento(B))*
- *Complemento(B) = todas as frases que não pertencem a B*

INTERSECÇÃO DE TRANSDUTORES

```
fsmdifference A.fsm B.fsm > C.fsm
```

A.fsm

B.fsm

C.fsm

REMOÇÃO DE ESTADOS INACESSÍVEIS

- com a opção -t, devolve (exit status) 1 se a saída não tiver estados, útil para testar se a saída é vazia ...

```
fsmconnect A.fsm > C.fsm
```

A.fsm

C.fsm